



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,791	03/15/2006	Masanori Masuda	DK-US065035	2798
22919 7590 08/20/2008 GLOBAL IP COUNSELORS, LLP 1233 20TH STREET, NW, SUITE 700 WASHINGTON, DC 20036-2680				
EXAMINER				
TRIEU, THEREA				
ART UNIT		PAPER NUMBER		
3748				
MAIL DATE		DELIVERY MODE		
08/20/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/571,791

**Applicant(s)**

MASUDA, MASANORI

**Examiner**

Theresa Trieu

**Art Unit**

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-10 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on Mar. 15, 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date Mar. 15, 2006  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_  
5) ☐ Notice of Inventor's Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Receipt and entry of Applicant's Preliminary Amendment filed on Mar. 15, 2006 is acknowledged.

#### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "42" (see page 13, line 17- Fig. 2) . Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

3. The disclosure is objected to because of the following informalities: page 14, line 4, "43" should be changed to -- 42 --. Appropriate correction is required.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (Patent Number 453,641).

Regarding claims 1-4 and 9, as shown in Figs. 1-3, Johnson discloses a rotary fluid machine comprising a first rotation mechanism (not numbered; however, clearly seen in Fig. 2) and a second rotation mechanism (not numbered; however, clearly seen in Fig. 2), each of which including: a cylinder 4, 4<sup>x</sup>, 6, 6<sup>x</sup> having an annular cylinder chamber 5, 5<sup>x</sup>; an annular piston 10, 10<sup>x</sup> which is contained in the cylinder chamber 5, 5<sup>x</sup> to be eccentric to the cylinder 6, 6<sup>x</sup> and divides the cylinder chamber into an outer working chamber 5, 5<sup>x</sup> and an inner working chamber 5, 5<sup>x</sup>; and a blade 15 which is arranged in the cylinder chamber to divide each of the working chambers into a high pressure region and a low pressure region, the piston 10 and the cylinder 4, 4<sup>x</sup>, 6, 6<sup>x</sup> serving as co-operating parts and any one of the piston 10 and the cylinder being stationary and the other being moving such that the moving co-operating part rotates about the stationary co-operating part, wherein the first rotation mechanism and the second rotation mechanism are arranged to be adjacent to each other with a partition plate 2 sandwiched therebetween and the two moving co-operating parts 4, 4<sup>x</sup>, 6, 6<sup>x</sup> or the two stationary co-operating parts 4, 4<sup>x</sup>, 6, 6<sup>x</sup> of the first rotation mechanism and the second rotation mechanism are arranged such that one of the co-operating parts is provided at one side of the end plate and

the other is provided at the other side of the partition plate 2; the inner working chambers 5 of the cylinder chambers of the first and the second rotation mechanisms serve as low-stage compression/compression chambers and the outer working chambers 5 of the cylinder chambers of the first and the second rotation mechanisms serve as high-stage compression chambers/expansion chambers; the partition plate 2 serves as the end plates of the co-operating parts 4, 4<sup>x</sup>, 6, 6<sup>x</sup> of the first and the second rotation mechanisms; the first and the second rotation mechanisms are configured to rotate with a 90° phase difference from each other.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Nash (Patent Number 300,628)

Johnson discloses the invention as recited above; however, Johnson fails to disclose individual end plates.

Nash teaches that it is conventional in the art to utilize the co-operating part A of the first rotation mechanism (see Fig. 1) and the co-operating part (A) of the second rotation mechanism adjacent to the first rotation mechanism have individual end plates E, and the partition plate (B') is formed of the end plates (E) of the co-operating parts (A) of the first and second rotation mechanisms. It would have been obvious to one having ordinary skill in the art at the time the

invention was made, to have utilized the individual end plates, as taught by Nash in the Johnson apparatus, since the use thereof would have controlled the eccentric movement of the piston.

7. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Sugimoto (Patent Number 4,990,071)

Johnson discloses the invention as recited above; however, Johnson fails to disclose a compliance mechanism.

Regarding claim 6, as shown in Fig. 1, Sugimoto teaches that it is conventional in the art to utilize the moving co-operating parts 213, 223 of the first and second rotation mechanisms are connected to a drive shaft 60 and each of the first and the second rotation mechanism is provided with a compliance mechanism 33 for adjusting the position of the co-operating parts 213, 223 in the axial direction of the drive shaft (33). With regard claim 8, Sugimoto discloses the moving co-operating parts 213, 223 of the first and second rotation mechanisms are connected to a drive shaft 60 and a balance weight 693 is provided at part of the drive shaft 60 located between the end plates of the co-operating parts of the first and the second rotation mechanisms adjacent to each other. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the compliance mechanism, as taught by Sugimoto in the Johnson apparatus, since the use thereof would have adjust the position of the co-operating parts in the axial direction of the drive shaft.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Ni (U.S. Patent Application Publication Number 2003/0194340)

Johnson discloses the invention as recited above; however, Johnson fails to disclose a compliance mechanism.

Regarding claim 7, as shown in Fig. 1, Ni teaches that it is conventional in the art to utilize the moving co-operating parts 61, 61' of the first and second rotation mechanisms are connected to a drive shaft 40 and each of the first rotation mechanism and the second rotation mechanism is provided with a compliance mechanism 68 for adjusting the position of the co-operating parts 61, 61' in the direction orthogonal to the axial direction of the drive shaft 40. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the compliance mechanism, as taught by Ni in the Johnson apparatus, since the use thereof would have adjust the position of the co-operating parts in a direction orthogonal to the axial direction of the drive shaft.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of JP (Publication Number JP 51-23371)

Johnson discloses the invention as recited above; however, Johnson fails to disclose a swing bushing.

Regarding claim 10, as shown in Figs. 4-6, JP teaches that it is conventional in the art to utilize in each of the first and second rotation mechanisms, part of the annular piston 10 is cut off such that the piston is C-shaped, the blade 9 extends from the inner wall surface to the outer wall surface of the cylinder chamber 8 and passes through the cut-off portion of the piston 10 and a swing bushing 11 is provided in the cut-off portion of the piston 10 to contact the piston and the blade 9 via the surfaces thereof such that the blade 9 freely reciprocates and the blade 9 and the piston 10 make relative swings. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the swing bushing, as taught by JP in the

Johnson apparatus, since the use thereof would have performed the reciprocating and sliding motions of the blade with respect to the piston.

***Prior Art***

10. The IDS (PTO-1449) filed on Mar. 15, 2006 has been considered. An initialized copy is attached hereto.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of three patents: Rydberg et al. (U.S. Patent Number 2,966,898), Rydberg et al. (U.S. Patent Number 3,125,031) and Braun (U.S. Patent Number 3,782,865), each further discloses a state of the art.

***Conclusion***

12. Applicant is duly reminded that a complete response must satisfy the requirements of 37 C.F.R. 1.111, including: "The reply must present arguments pointing out the specific distinctions believed to render the claims, including any newly presented claims, patentable over any applied references. A general allegation that the claims "define a patentable invention" without specifically pointing out how the language of the claims patentably distinguishes them from the references does not comply with the requirements of this section. Moreover, "The prompt development of a clear Issue requires that the replies of the applicant meet the objections to and rejections of the claims." Applicant should also specifically point out the support for any amendments made to the disclosure. See MPEP §2163.06 II(A), MPEP §2163.06 and MPEP §714.02. The "disclosure" includes the claims, the specification and the drawings.



*Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa Trieu whose telephone number is 571-272-4868. The examiner can normally be reached on Monday-Friday 8:30am- 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TT

/Theresa Trieu/  
Primary Examiner, Art Unit 3748